

## *Carbunculus ardens*

### *The Garnet on the Narses Cross in Context*

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A large cabochon garnet, measuring about twenty millimeters in diameter, is a notable feature of the Narses Cross. This cross, together with recent finds in England of flat, precious-metal crosses, offers fresh evidence for the interpretation of early Byzantine liturgical decoration. I would like to look briefly at the overall context for sheet metal crosses set with gems and then consider how the mineral we call garnet was regarded in modern and ancient literature. With this background, possible meanings underlying the use of this particular gemstone as the focal point of the cross will be explored.

#### The Cross in Context

It is well known that crosses constituted a fundamental part of the liturgical equipment in early Byzantine churches.<sup>1</sup> The majority of surviving examples are Latin in form, engraved with inscriptions and occasionally imagery. Remarkably few examples set with gemstones like the Narses Cross have survived. These

presumably evoked the luxury of *cruces gemmatae*, crosses completely encrusted with gems, made for patrons at the highest imperial and ecclesiastical levels. The inscribed silver gilt cross, gifted to the city of Rome by the Byzantine emperor Justin II (reigned 565–578), exemplifies this tradition in the period more or less contemporary with the Narses Cross.<sup>2</sup> The Justin II cross was worked in relief on both sides and set with gems of many varieties. A lost jeweled cross formerly in the treasury of the Sancta Sanctorum of the Vatican was set with garnet and emerald cabochons along the arms and bore a central setting with a cross-shaped collet, presumably for a relic.<sup>3</sup> Another silver *crux gemmata*, decorated with rows of gems along the arms on the front side, from the Great Lavra monastery on Mt. Athos,<sup>4</sup> shows the survival of this tradition into the middle Byzantine era. Such crosses were exceptional commissions, and sheet metal crosses of less exalted status were only rarely decorated with gemstones.

1 The *Vita S. Pancratii* relates that the Apostle Peter sent Pancratius to spread the Gospel with the essential equipment needed for every church: two Gospel books, two books of Acts by Paul, two paten and chalice sets, two cedar-wood crosses and two illustrated volumes of the Old and New Testaments for the decoration of the church (C. Mango, ed., *The Art of the Byzantine Empire: 312–1453* [Englewood Cliffs, New Jersey, 1972], 137–38.). See also Cotsonis, *Processional Crosses* (p. 144 n. 116 above), 5–6. A passage in the Passion of Saint Shushanik (a text relating fifth-century events, preserved in both Georgian and Armenian manuscripts of the tenth century) underlines the commonality of ecclesiastical traditions in the period: “And the saintly princess Shushanik begged Andreas to immediately evacuate the Holy Sign of Nune and the many other relics of the saints—the ones that had come down to her from Saint Grigor—as well as the vessels of the churches and the numerous crosses” (*The Passion of Saint Shushanik: The Martyrdom of St. Vardan Mamikonian’s Daughter, A History of the Holy Cross of Nune the Leader of Georgia*, vol. 2, trans. K. H. Dz. Maksoudian, ed. C. H. Zakian [New York, 1999], 49).

2 C. Belting-Ihm, “Das Justinus-Kreuz in der Schatzkammer der Peterskirche zu Rom,” *JbZMusMainz* 12 (1965): 142–66; J. Beckwith, *Early Christian and Byzantine Art* (London, 1970), 43. The inscription on the cross, which may be later in date, reads: “With the wood with which Christ conquered man’s enemy, Justin gives his help to Rome and his wife offers the ornamentation.” It is 40.7 cm high, not including its spike. A 1793 inventory of the gems does not agree with the existing gems on the cross and there is no way to determine whether these are Byzantine in date (Belting-Ihm, *Justinus-Kreuz*, 146). Currently pearls encircle the central medallion and on the arms pearls alternate with emeralds, aquamarine, rock crystal and rose quartz, agates, what are identified as carnelians (in modern photographs these appear to be garnets), serpentine, nephrite, marble and glass. For the recent restoration, see Times Online, 26 November 2009.

3 J. Hubert, J. Porcher, and W. F. Volbach, eds., *Europe in the Dark Ages* (London, 1969), 232, 360, no. 246. The authors identify garnets, and emeralds perhaps can be assumed from the shapes of the gems at the ends of the arms; they date the cross to the sixth century but the garnet cloisonné backing is certainly later.

4 Cotsonis, *Processional Crosses*, 49–51, fig. 20a–b.



FIG. 20 Processional cross, tinned brass, height 52.4 cm; Christian Schmidt Collection (photograph courtesy Kimbell Art Museum)



FIG. 21 Detail of reverse of processional cross; Christian Schmidt Collection (photograph courtesy Kimbell Art Museum)

Greenwood has reviewed above both the Armenian parallels for the Narses Cross and the range of hammered silver crosses preserved in the hoards of church treasures from Syria. The latter share key features with the present cross, including solid serifs at the points of the arms, horizontal crossarms pierced with holes for *pendilia*, and inscriptions or incised decoration highlighted with niello.<sup>5</sup> They range from thirty to sixty cm in height, including the pointed tangs, which were designed to be set into a staff for procession or display.<sup>6</sup> Assay stamps were frequently applied to the tang, which is missing on the Narses Cross. The ancient silver strips at the bottom of the cross, designed to strengthen the join between the tang and crossarm, were apparently unsuccessful. The inscriptions on the Syrian and Armenian crosses reveal that they were typically personalized *ex-votos*, donated by devout members of the congregation or, in some cases, by their bishops. Of the surviving silver crosses in the East, only the Narses Cross (figs. 1–2) and the ninth- to twelfth-century Aparan Cross (fig. 19) retain gemstones—in the case of the latter, a banded agate or sardonyx.<sup>7</sup>

Many more crosses fabricated in a range of metals were manufactured than have survived. Numerous flat crosses in copper alloy of middle Byzantine date have been preserved in Armenia; some of these originally had settings at the center and on the arms or moldings imitating gems.<sup>8</sup> A tinned brass cross, now in a private collection in Germany, of similar proportions to the Narses Cross, confirms that this general form was already in production in the late antique period (figs. 20–21).<sup>9</sup> This had a separately fashioned central setting, now missing,

5 Mango, *Silver from Early Byzantium* (p. 115 n. 4 above), 53–54, 65, 86–91 (nos. 7–8, Hama Treasure, mid-sixth century); 255, no. 65 (Phela Treasure, sixth to seventh century); 238–39, nos. 67–68 (Ma'aret en-Mona treasure, sixth to seventh century); 249–50, no. 76 (Čaginkom [Divriği] [?] treasure, 527–47 CE [?]); cf. also 93–95, nos. 9–10, two smaller inscribed silver crosses from the Hama Treasure intended to be nailed against a flat surface. For related tanged crosses in copper alloy see Cotsonis, *Processional Crosses*, 88–99, nos. 8–10; these are smaller and the serifs at the points of the arms are flattened.

6 Mango, *Silver from Early Byzantium*, 87–88.

7 Durand, Rapti, and Giovannoni, *Armenia Sacra* (p. 115 n. 1 above), 205–6, no. 74.

8 Ibid., 212–17, nos. 84–92.

9 L. Wamser and G. Zahlhaas, eds., *Rom und Byzanz: Archäologische Kostbarkeiten aus Bayern* (Munich, 1998), 72–76, no. 64; the height of the cross is 52.4 cm.





FIG. 22 Folded cross with one garnet in setting, gold, garnet; Staffordshire Hoard K655aa (photograph by Guy Evans, Barbican Research Associates)



FIG. 23 Enlarged view of garnet and setting from the folded cross; Staffordshire Hoard BK659aa (photograph by Guy Evans, Barbican Research Associates)

which was presented as held aloft by angels engraved on the crossarms; this may have been for a jewel, a relic capsule, or a symbolic image like the *hetoimasia*. It was complemented by an engraved bust of Christ in a medallion on the reverse. The figural decoration suggests a date for the cross in the late fifth century.

At the other end of the scale in both size and value, small pectoral crosses worked in gold were often mounted with a central setting for a gemstone or glass inlay.<sup>10</sup> Like the processional crosses, these include box-like constructions, examples with elaborately decorated surfaces, as well as some made from flat sheets of gold.<sup>11</sup> The many variants are not infrequently set with garnet cabochons of conical form prepared with a flat upper surface ready for engraving (though few were engraved). The majority of these are not closely dated, but Spier has argued that the garnet stones themselves represent Byzantine lapidary work of the late fifth and first half of the sixth century.<sup>12</sup>

The picture of gemmed Latin crosses sketched in this brief overview has been augmented by the recent discovery of two damaged crosses among a large number of Anglo-Saxon period objects retrieved from a field near Staffordshire, West Midlands, England (figs. 22 and 24); the find is now known as the Staffordshire Hoard.<sup>13</sup> One of the crosses was made in pure gold and set with garnets.

10 Inter alia, E. Coche de la Ferté, *Collection Hélène Stathatos*, vol. 2, *Les objets byzantins et post-byzantins* (Limoges, 1957), 59, no. 44 and 60, no. 47; *DOCat* 2:22–23, nos. 16 and 18; I. Baldini Lippolis, *L'Oreficeria nell'Impero di Costantinopoli tra IV e VII secolo* (Bari, 1999), 147–8, group 10.a, nos 1–8; Wamser and Zahlhaas, *Rom und Byzanz*, 36 no. 25; 195–97, nos. 272–73, 275–76, 279; A. MacGregor, “A Seventh-Century Pectoral Cross from Holderness, East Yorkshire,” *Medieval Archaeology* 44 (2000), 217–22; B. Pitarakis, *Les croix-reliquaires pectorales byzantines en bronze* (Paris 2006), 23–25, figs. 1–2, 5 (gold, with sockets for a gem or relic); K. Leahy and R. Bland, *The Staffordshire Hoard* (London, 2010), 16.

11 N. Adams, *Bright Lights in the Dark Ages, Early Medieval Art in Eugene Thaw Collection* (New York, 2014), cat. no. 6.7.

12 J. Spier, *Late Antique and Early Christian Gems* (Wiesbaden, 2007), 25, 87–94.

13 Leahy and Bland, *Staffordshire Hoard*, 36–39. The finds were scattered across a plowed field, recovered initially by a metal detectorist in 2009 and then by county archaeologists in 2012. The recovered pieces include numerous sword pommel and hilt fittings, cloisonné mounts for containers and silver gilt foils stamped with figural decoration. The registration numbers of the folded cross are: 2010.0138K0655 and 2010.LH.10.K0655; the numbers of the inscribed crossarm are: 2010.0138K0550 and 2010.LH.10.K0550. For further information see: <http://staffordshirehoard.org.uk> (accessed 9 April 2014).



FIG. 24 Cross with inscription, gold, Staffordshire Hoard K55obb (photograph by Guy Evans, Barbican Research Associates)

A silver gilt strip in the hoard, most probably the arm of a cross, bears an inscription whose epigraphy suggests a terminus post quem for the hoard in the mid-seventh or early eighth century.<sup>14</sup> Most of the assemblage was composed of weaponry fitments such as sword pommels, whose archaeological parallels date to the second half of the sixth and first half of the seventh centuries.<sup>15</sup>

The first Staffordshire Hoard cross was made of hammered gold sheet with flat serifs at the arm tips (fig. 22). Purposefully bent and folded to reduce it to a smaller size, its greatest dimension is currently 14.4 centimeters. It was engraved, not with words, but with panels of interlaced zoomorphic ornament of the type known as Germanic Style II, whose treatment suggests the decoration was executed in Anglo-Saxon England.<sup>16</sup> It was decorated with five garnet cabochons in settings, one in the center and one on each arm. These were large stones of excellent color and quality. One was deemed so precious that it has a gold repair on one side, intended to strengthen the stone along a crack (fig. 23). As on the

Narses Cross, the garnets were set in separate gold collets, surrounded by filigree wire.<sup>17</sup>

The Staffordshire Hoard silver gilt crossarm retains a single setting for a large gem, also in the form of a collet surrounded by filigree wire (fig. 24). In its bent state it measures 8.95 centimeters, so originally it would have been about 18 centimeters in length. Assuming this to be a horizontal arm, this would give overall dimensions for the proposed cross of approximately 50 × 40 centimeters. The strip is incised on both sides with inscriptions in Latin taken from Numbers 10:35: “Rise up, O Lord, and may thy enemies be dispersed and those who hate thee be driven from thy face.”<sup>18</sup>

The combined evidence of the Narses Cross and these new Anglo-Saxon crosses shows that garnets were the gemstone of choice for crosses made in the sixth and first half of the seventh century. An examination of the Christian literature suggests that this association, which obviously reflected prevailing tastes, was also purposeful

14 M. P. Brown, “The Manuscript Context for the Inscription,” paper delivered at the Staffordshire Hoard Symposium, British Museum, March 2010. Published at <http://beta.finds.org.uk/staffshoardsymposium> (accessed 21 October 2015).

15 S. Fischer and J. Soulat, “The Typochronology of Sword Pommels in the Staffordshire Hoard,” paper delivered at the Staffordshire Hoard Symposium (see above).

16 K. Høilund Nielsen, “Style II and All That: The Potential of the Hoard for Statistical Study of Chronology and Geographical Distributions,” paper delivered at the Staffordshire Hoard Symposium (see above).

17 The plain collet on the Narses Cross is surrounded by a single beaded wire, whereas the Staffordshire hoard cross garnets were set in dogtooth collets surrounded by two rows of beaded wire flanking twisted filigree wire.

18 This was the prayer of the Israelites in the Wilderness. The actual inscriptions read: Surge .dne disepentur inimici tui et | Fugent qui oderunt te a facie tua and Surge d(omi)ne disepintur | inimici tui et fugiu(n)t quio de | runt te a facie tua | adiute nos d(eu)s. The tone of the inscription brings to mind tenth-century references to gold jeweled crosses carried in imperial military campaigns (Constantine Porphyrogenetos, *De cerimoniis* 485, lines 5–6 and *Three Treatises* 124–25, cited by Cotsonis, *Processional Crosses* [p. 144 n. 116 above], 56, who at the time stated: “Gold processional crosses do not survive. . .”).



and meaningful. Before examining some Christian attitudes toward garnet gemstones it is useful to discuss briefly the mineral we call garnet from both modern and ancient perspectives.

### Garnet Mineralogy

Chemical analyses have proven conclusively that garnet was the most common translucent gemstone in the red and purple color range used in the ancient world.<sup>19</sup> Archaeogemmological investigations have only rarely identified ancient rubies and spinels, the two other primary red gemstones.<sup>20</sup> Garnets were used intensively in Europe for over a thousand years, mounted in jewelry, engraved as seal stones and polished into flat plates for setting in cloisonné.<sup>21</sup>

Unfortunately for both modern researchers and ancient observers, garnet is one of the most common gemstones on the face of the earth and modern science recognizes twenty-four species of this mineral. The majority of garnets dating from the fourth century BCE to the late seventh century CE fall in the red/purple color spectrum. As they crystallize in continuous solid solution with one another between two species—pyrope and almandine—they are referred to as pyraldines.<sup>22</sup> The garnet on the Narses Cross was tested using RAMAN spectrography and found to belong in this pyrope-almandine

series.<sup>23</sup> It is densely filled with black inclusions of ilmenite as well as diopside crystals. Ilmenite is a common inclusion in garnets with a strong almandine component and neither of these inclusions is indicative of either a metamorphic or igneous source. Nor do they indicate where the Narses Cross stone may have originated.

In a few cases, intensive scientific analysis of garnets, conducted primarily on the small garnet plates set on early medieval garnet cloisonné, has pointed to a specific origin for the stones.<sup>24</sup> In general, however, given the complexity of garnet mineralogy and the lack of adequate documentation of deposits, the ancient sources recorded by Pliny in the first century CE—the Indian subcontinent (including modern Pakistan and Afghanistan); Sri Lanka; north, west, and east Africa; Turkey; Portugal; and the Czech Republic—all remain as possible sources of garnets used in the early Byzantine period.

### Classical Sources

The first ancient text to attempt to describe the stones we know as garnet—the *Περὶ λίθων* by Theophrastus (ca. 371–287 BCE)—corresponds to the early stages of empirical investigation pioneered by Aristotle. Pliny's *Naturalis historiae* (before 79 CE) presents a complex mixture of Aristotelian detachment interwoven with a fascination with the astrological, magical, and medicinal powers of stones. Such beliefs were also present in the Old Testament and were given full expression in lapidary texts from the Hellenistic period. Roman-period lapidary texts such as the long poem the *Orphei lithica*, describing the powers of stones and the symbolism of their colours, illustrate aspects of this complex mixture of superstition and *materia medica*.<sup>25</sup> Later,

19 N. Adams, "The Garnet Millennium: The Role of Seal Stones in Garnet Studies" in *Gems of Heaven: Recent Research on Engraved Gemstones in Late Antiquity, AD 200–600*, ed. C. Entwistle and N. Adams, BM Research Publication 177 (London, 2011), 10–24; N. Adams, C. Lüle, E. Passmore, with H. Falk and N. Sims-Williams, "Indikois Lithois: Catalogue and Preliminary Characterisation of Two Distinct Groups of Garnet Seal Stones from Central and South Asia," in *Gems of Heaven*, 25–38.

20 In the first archeogemmological investigation of ancient stones, J. Ogden, *Jewellery of the Ancient World* (London 1982), identified only two ancient rubies (p. 95) and a single spinel (in this case a green specimen, p. 111).

21 An overview in Adams, "Garnet Millennium," 1–5.

22 The pyraldine series is one of two primary groups of this complex nesosilicate mineral which modern science separates into twenty-four distinct species. The classic source on garnet mineralogy remains: W. A. Deer, R. A. Howie, and J. Zussman, *Rock-Forming Minerals*, vol. 1A, *Orthosilicates*, 2nd ed. (London and New York, 1982), 467–698. For introductory overviews in English see: J. D. Rouse, *Garnet* (London, 1987) and H. A. Gilg, D. Hile, S. Liebetrau, P. Modreski, G. Neumeier, and G. Staebler, eds., *Garnet, Great Balls of Fire*, extralapis 9 (East Hampton, CT, 2008), 20.

23 The stone was identified by the British Museum Research Laboratory using a Horiba Infinity RAMAN spectrometer with a green (532 nm) laser with a maximum power of 2 mW at the sample.

24 H. Gilg, N. Gast, and T. Calligaro, "Vom Karfunkelstein," in *Karfunkelstein und Seide: Neue Schätze aus Bayerns Frühzeit*, ed. L. Wamser (Munich, 2010), 87–100.

25 *Orphei lithica* in *Les Lapidaires Grecs*, ed. and trans. R. Halleux and J. Schamp (Paris, 1985), 3–123. The editors suggest that the poem was composed in the second half of the second century CE. Within the tale of an annual sacrifice to the god Helios, the text contains an introduction to the magical properties of stones given to Orpheus by one of his companions Theodamus (the son of Priam). The poem discusses their properties and uses, their role in sacrifice and the granting of prayers as well as their anti-venom applications. R. I. Kostov,

medieval Christian writers in the West drew upon both Biblical and Graeco-Roman traditions to formulate their vision of stones as impregnated by divine power with virtues and healing qualities.<sup>26</sup>

The primary obstacle to analysis of this diverse body of literature is the accurate determination of which red gemstones were actually the mineral we now call garnet. In contrast to the stones such as diamond, rock crystal, and hematite, whose identity is reasonably unambiguous in ancient texts, the identification of garnet beyond a few terms remains insecure. In light of what is known today about the complex mineralogy of garnets, it is not surprising that Hebrew, Greek, and Roman authors wrestled with the problem of nomenclature for hues of the many red stones they encountered. In the Orphic tradition both the names and the qualities of red colored gemstones are often mixed up, with particular confusion evidenced between chalcedony and garnet.<sup>27</sup> This confusion persisted for many centuries, well into the late medieval period when versions of classical texts were still being circulated, copied, and interpolated.<sup>28</sup>

"Orphic Lithica as a Source of Late Antiquity Mineralogical Knowledge," *Annual of the University of Mining and Geology "St. Ivan Rilski"* 5, no. 1, Geology and Geophysics (Sofia, 2008), 109–10, lists other known classical sources, most of which have not survived.

26 Most prominently in the popular verse lapidary of Marbodius of Rennes (ca. 1035–1123), *Liber lapidum*, written ca. 1090: R. Halleux, "Damigéron, Evax et Marbode: L'héritage alexandrin dans les lapidaires médiévaux," *Studi medievali*, 3rd series, 15, no. 1 (1974): 327–47.

27 Halleux and Schamp, *Lapidaires Grecs*, 187–89, 333–4 (Lapidaire Nautique 1); *ibid.*, 266 (Damigéron-Evax 27). On the confusion between garnet and chalcedony see Socrates et Dionysius, *Peri Lithôn* 29 (*Lapidaires Grecs* 167, note 3 and 328–29): "Chalcedony: de couleur, elle a l'aspect du feu, semblable à l'escarboule . . . cette pierre est la lychnite, l'escarboule pure, couleur de sang . . . Elle le rendra aimable, aisément compréhensible, capable de tout réaliser, et vainqueur des naufrages . . . Elle croît en Inde, où croissent les pierres précieuses." The *Orphei lithica kerygmata* and the Socrates and Dionysius *Περὶ λίθων* represent two different manuscript traditions of a lapidary text describing 53 stones that eventually dovetailed into one. The former was probably written in the second half of the second century CE while the latter may have been written in the Roman Imperial period, perhaps in Egypt. The original Damigéron-Evax textual tradition was probably written not long after Pliny, ca. second century CE (*Lapidaires grecs*, 138–39, 144, 226).

28 When dealing with these later texts the alignment of modern mineralogical terminology with ancient terms is a futile exercise, as shown by the recent translation of the *Lapidum virtutibus* written in the eleventh century by Michael Psellos: A. Montana, "Storia della mineralogia antica. I. La mineralogia a bisanzio nel xi secolo D.C.:

Two terms that survive in many texts through the centuries and are generally accepted to represent the gemstone we call garnet are ἄνθραξ (*anthrax*) and *carbunculus*. These names encapsulate the property ancient authors consistently ascribe to garnets—the fiery or glowing quality of the stones. Ἄνθραξ was first used by Aristotle (d. ca. 322 BCE), who wrote that: "the seal-stone called anthrax is the least affected by fire of all the stones" (*Meteorologica* 4.9, 387B). The word has at its root \*θρακα, meaning to glow, as in glowing embers or flaming red hot coals. The same word was applied to charcoal or soft coal (lignite) and Theophrastus (*Περὶ λίθων*, 18–19) places his discussion of the two side by side to highlight the paradox of two rocks called by the same name, one of which burns in a common fire and the other of which glows, but is incombustible.<sup>29</sup> One of the Latin words used for garnet by Pliny (*Naturalis historiae* 32.25.92), *carbunculus*, likewise meant "little charcoal," but here, as in the *Meteorologica*, it is consistently applied to a hard gemstone.

Many further names that appear in Pliny's text might have been used for the gemstone we call garnet;<sup>30</sup> some, such as *alabandicus* (*Naturalis historiae* 36.23.62), persisted into the later middle ages. One further term of interest here is *lychnis*: "To the same class of fiery red stones belongs the 'lychnis,' so-called from the kindling of lamps because at that time it is exceptionally beautiful" (*Naturalis historiae* 32.29.103). Pliny records it in Orthosia, Caria, and India while Strabo (*Geographica* 17.3.11) also noted lychnite (λυχνίτης) in North Africa. Lychnis (the word derives from λύχνος [lamp]) also appears in Hellenistic lapidary texts, where the stone is described as resembling a flame and displaying a red hue ranging from scarlet to dark charcoal.<sup>31</sup> These terms remained influential for many centuries.

I poteri insiti nelle pietre secondo Michele Psello," *Rendiconti Lincei* 16, no. 4 (2005): 227–95, with mineralogical speculations at 255–82.

29 *Theophrastus on Stones*, ed. and trans. E. R. Caley and J. F. C. Richards (Columbus, OH, 1956), 48, 89–90. In this passage Theophrastus also notes that seals were cut from this stone, commenting that even small stones were very expensive, costing forty pieces of gold.

30 Adams, "Garnet Millennium" (p. 151 n. 19 above), 14–16.

31 *Orphei lithica*, 96, no. 8, and *Orphei lithica kerygmata* in Halleux and Schamp, *Lapidaires grecs*, 150, no. 7, notes p. 306; Kostov, "Orphic Lithica," 112. By the time of these late texts it is possible that this incorporates red stones such as ruby and spinel as well as garnet.



Isidore of Seville (ca. 560–636), for example, who relied heavily upon Pliny, placed the carbunculus, anthracitis, and lychnis in his category of fiery gems (*De ignites*), asserting that there were twelve varieties of these particular stones.<sup>32</sup>

### Biblical and Christian Sources

The diverse strands of these traditions are evident in *Στρωματεῖς*, instructions for the perfection of the Christian life written by one of the early Church Fathers, Clement of Alexandria (ca. 150–215). In his mystical interpretation of the gems on the famous *ephod* and *hoshen* of the high priest Aaron in the Torah (Ex. 28:9), for example, he suggests (5.6.37.1): “Now the high priest’s robe is the symbol of the world of sense. The seven planets are represented by the five stones and the two carbuncles (ἄνθρακες), for Saturn and the Moon (Selene). The former is southern, and moist, and earthy, and heavy; the latter aerial. . . .”<sup>33</sup> Later Clement describes the emerald (σμαράγδος) on the accompanying breastplate, the hoshen, in the same manner, as a signifier of “the sun and moon, the helpers of nature.” His assignment of garnet and emerald in these passages is the exact opposite of that which appears in the Septuagint, where the ephod gems are rendered as λίθους σμαράγδου (emerald stones; Ex. 28:9)<sup>34</sup> and the first stone of the second row of the breastplate as ἄνθραξ (garnet; Ex. 28:18).

The Greek translators of the Pentateuch in the third century BCE assigned the familiar terms ἄνθραξ and σμαράγδος to two of the original Hebrew terms in the Jewish scriptures whose meaning was unclear. In the Torah in Shemot (Exodus) 28:9, the two stones which the text commands be engraved with the names of the sons of Israel and be placed at either shoulder strap of the ephod, are called הַשְּׁהִם (shoham). The hoshen or breastplate bears four rows of stones and the first stone on the second row is נֹפֶק (nofek) (Shemot/Exodus 28:18). The first term appears in another variant in Bereshit (Genesis)

2:12, in the description of the region through which the river Pishon/Pison, one of the four rivers of Eden, flows. In this land, in addition to good gold, two products may be found: הַבְּדֹלַח (habedolach) and הַשְּׁהִם (hashoham).

These Hebrew terms cannot be securely identified. The first Genesis stone is often rendered as bdellium, considered by ancient and moderns authors alike to have been a resin-like gum similar to myrrh.<sup>35</sup> Hashoham or shoham has been considered to be onyx, chrysoprase, beryl, and malachite.<sup>36</sup> The stone on the second row of the hoshen in Exodus 28:18 has been variously identified as emerald/turquoise or garnet/ruby.<sup>37</sup>

In the Septuagint, the Genesis terms were transformed into: λίθος ὁ πράσινος (leek-coloured stone) and ἄνθραξ (carbuncle). In Jerome’s translation of the Old Testament in the Vulgate, the terms are rendered in Latin as *lapis prasinus* (again, leek-green stone) and *carbunculus* (garnet). Both terms appear in earlier Latin versions of the Pentateuch of uncertain authorship.<sup>38</sup> The Vulgate gives *duos lapides onychinos* and *carbunculus*, respectively, for the two Exodus passages. The translation of the Bible into Armenian by Maštoc’ (St. Mesrob) and Sahak, completed before 439/40 CE, followed the Septuagint and Origen’s Hexapla. Their text of Genesis 2:12 gives սուտակ (sutak) and դահանակ ափնաքարը (dahanak aknakare), in that order. The first term is usually translated as ruby while the second means green-yellow stone. In Exodus 28:9 and 28:18 the Armenian offers գմրուխտ *zmruxt* (emerald) for the ephod and նոնաքար *nrnak’ar* (garnet) for the hoshen.<sup>39</sup>

Conflicting identification of these Biblical gemstones persists in translations to this day,<sup>40</sup> and if any

32 The *Etymologies* of Isidore of Seville, ed. and trans. S. A. Barney, W. J. Lewis, J. A. Beach, and O. Berghof (Cambridge 2006), 326–27.

33 Clement of Alexandria, *The Stromata*, or *Miscellanies*, in *The Ante-Nicene Fathers*, ed. A. Roberts and J. Donaldson (1867; repr. Grand Rapids, 1983), 2:299–367 (here 453).

34 As Caley and Richards note (*Theophrastus*, 100–102), the term σμαράγδου may not necessarily have referred to emerald, but rather to bright green stones in general. For clarity here I have consistently translated it, and its Latin equivalent, smaragdus, as emerald.

35 F. Brown, R. Driver, C. Briggs, *Brown-Driver-Briggs Hebrew and English Lexicon* (Peabody, MA, 2004), 95d (Strong 916) also mention pearl as one of the listed possibilities.

36 Ibid., 995d (Strong 7718).

37 Ibid., 656c (Strong 5306).

38 *Poetae christiani quarti saeculi, incerti auctoris, Aquilinus Juvenius*, PL 19:347 and *Incerti auctoris Genesis*, PL 2:1099C. *Prasinus huic nomen, illi est carbunculum ardens*.

39 The first term derives from the Old Armenian \*գմրուխտ (\*zumruxt), from the Iranian \*zumurruft, related to Persian زمرد (zumurrud) and the Greek σμαράγδος (smaragdus) (H. Martirosyan, *Studies in Armenian Etymology* [Leiden, 2008], 120–21).

40 The King James and many modern versions often translate the hoshen term as emerald or turquoise, while the Revised English Bible gives purple garnet. Summaries of current Jewish scholarship

knowledge of actual vestments can be presumed, one wonders whether this is early evidence for the common male condition of red/green color blindness. In fact these divergences from the original Hebrew were known to early medieval authors such as the Venerable Bede, writing in Anglo-Saxon England in the early eighth century.<sup>41</sup>

It is clear from the review above that precise identification of the stones intended by the ancient authors of Biblical texts is not a useful exercise. From the fourth and fifth centuries onward, the convenient trope of green and red stones becomes formulaic in Christian exegeses such as Augustine of Hippo's three attempts to justify the events in Genesis.<sup>42</sup> The mixture of metaphorical and allegorical interpretation with classical knowledge of stones characterizes Christian attitudes toward gemstones.

Augustine (*De doctrina christiana*, 2.16.24, 61), for example, emphasizes the need for knowledge of animals, plants, and minerals to fully understand scriptural reference: "... ignorance of the numerous animals mentioned no less frequently in analogues is a great hindrance to understanding. The same is true of stones, herbs, and anything that has roots. Even a knowledge of the carbuncle, a stone that shines in the dark, explains many obscure passages in scripture where it is used as an analogy; and ignorance of the beryl and adamant often closes the doors to understanding."<sup>43</sup> In one of the early eighth-century letters of St. Boniface, the acquisition of divine wisdom is "more splendid than gold, more

precious than silver, as flaming as the carbunculus, as clear as crystal, as precious as topaz. . . ."<sup>44</sup>

The term ἄνθραξ in the Septuagint (Psalm 119:4, Proverbs 26:21, Isaiah 44:12) is given fresh interpretation in Jerome's *Commentariorum in Isaiam Prophetam*. He declares that the anthrax mentioned by John in the Apocalypse is not the burning coal as many imagine, but the gemstone carbunculus: "the color of a flame like fire, from which we perceive the altar of God to be full of garnets, that is, lit like a small stone or burning coals, capable of purging sin. Thus it is written when we read of God: coals were kindled by him."<sup>45</sup>

Ambrosius of Milan (ca. 340–97) in his description of the land through which the Phison flows, expands upon the meaning of the stones found in the region: "It holds as well, it says, a bright garnet, in which something of the little flame of our soul lives."<sup>46</sup> Finally, one of the finer expressions of how the Medieval mind justified and interpreted the splendid gold and gems they so admired is found in Bede in his commentary glossing Augustine on the same passage in the Pentateuch: "It has gold—living instruction, which is foreign to all uncleanness just like pure gold; garnet—truth, which no falsehood can conquer, just as the night cannot overcome the brilliance of the garnet; emerald—eternal life, because the greenness of that stone signifies the vigor of the vine."<sup>47</sup>

as to whether ἄνθραξ should be identified as garnet (pyrope according to some authors) or turquoise/emerald may be found in E. G. Hirsch, "Gems," <http://jewishencyclopedia.com> (accessed 31 January 2014) and U. S. Wurzbürger, "Precious Stones," *Encyclopedia Judaica* (Detroit, 2007), 16:475–78.

41 *Hexaemeron* (PL 91:46C): *Antiqua Translatio pro his habet carbunculum et lapidem prasinum. Est autem carbunculus, sicut et nomine probat, lapis ignei coloris, quo noctis quoque tenebras illustrare perhibetur. Est lapis prasinus viridantis aspectus: unde et Graece a porro, quod apud eos prason dicitur, nomen accepit.*

42 For example: *De genesi contra Manichaeos libri duo*, 2 and 10 (PL 34:195 and 203–4).

43 Augustine, *De doctrina christiana*, ed. and trans. R. P. H. Green (Oxford, 1995), 84–85. *Nam et carbunculi notitia, quod lucet in tenebris, multa illuminat etiam obscura librorum, ubicumque propter similitudinem ponitur; et ignorantia berylli vel adamantis claudit plerumque intelligentiae fores.*

44 *Bonifatii epistulae Willibaldi vita Bonifatii, briefe des Bonifatius, Willibalds leben des Bonifatius*, trans M. Tangl and P. H. Külb, ed. R. Rau (Darmstadt, 1958), 9.19–21: "... gloriose ac vere pulchritudinis venustatem adacquire, id est divinam sapientiam, quae est splendidior auro, speciosior argento, ignitior carbunculo, candidior cristallo, pretiosior topazio. . . ."

45 *Commentariorum in Isaiam Prophetam libri duo, liber tertius* (PL 24:96B–C): *Quod autem altare sub quo animae martyrum sunt, videantur in coelo, et Joannes in Apocalypsi loquitur (Rev. 6): et calculus iste qui a solis LXX ἄνθραξ, id est, carbunculus interpretatus (or interpretatum) potest non carbonum significare, vel prunam, et plerique existimant, sed ἄνθραξ, id est, carbunculum lapidem, qui ob coloris flammei similitudinem igneus appellatur. Ex quo intelligimus altare Dei plenum esse carbunculis, hoc est, ignitis calculis et prunis, peccata purgantibus (Psalms 17:9).*

46 *De paradiso*, 3.151 (PL 14:281A): *Habet etiam splendidum, inquit, carbunculum, in quo quidam animae nostrae vivit igniculus.*

47 *In pentateuchum commentarii, Expositio in primum librum Mosis*, 2 (PL 91:207C): *Habet aurum disciplinam vivendi, quae aliena est ab omni sorde, velut aurum purum; carbunculum, veritatem, quam nulla falsitas vincit, sicut carbunculi fulgor nocte non vincitur; prasinum, vitam aeternam, quae viriditate lapidis propter vigorem vitae significatur.*



### The Narses Cross Garnet

It is clear that garnets in ancient times were valued for their color and quality of internal light, properties we now know result from their chemical composition and mineral inclusions. In the case of the Narses Cross, the garnet glows with a particularly sombre light occluded by dark inclusions. Unlike the clear garnets set on the Staffordshire Hoard crosses, the Armenian cross gem is densely filled with inclusions, many so close to the surface that the lapidary who prepared and polished the stone was not able to achieve a brilliant polish. As it is mounted, its deep red color can barely be perceived, yet this dark and mysterious garnet was set at the center of a valuable and impressive donative cross.

Its translucency would have been greater and color richer before it was mounted. Pliny is clear about the advantages of holding stones up to the sunlight. He notes, for example (*Naturalis historiae* 32.25.95) that “male” Carthaginian stones are *sub caelo flammeos, contra radios solis scintillare*. . . (“flaming under heaven but sparkling against the rays of the sun”). The Narses Cross garnet, when held up to an artificial or natural light source, sparkles in much the same way Pliny described (fig. 25). When lit only by a flame it glows with light in the darkness as described by the Christian authors cited above.

At a material level the Narses garnet is a relatively large stone and, assuming the early Byzantines, like the Romans, assessed and valued stones by size and weight as well as color,<sup>48</sup> it was probably an expensive gem. The acquisition, mounting, and display of a beautiful gemstone were statements of prestige and wealth, but by the reign of Justinian I (529–565) there is some evidence that garnets were no longer ranked in the top tier of stones. The *Codex iuris civilis Justinianus* 11.12.1 prohibited the use of pearls, emeralds, and hyacinths (probably sapphires) on bridles, saddles, belts, and personal ornaments; these were reserved for imperial ornaments and could be handled only by palace artisans in imperial workshops.<sup>49</sup> Lesser and presumably more abundant



FIG. 25 The Nerseh cross garnet (photograph courtesy Yanni Petsopoulos)

stones such as garnet stones were appropriate for military gear and could perhaps be set by independent artisans or workshops. The strictures of these conventions in the west is suggested by the appearance of the overall jeweled crosses on the bookcovers probably given by Pope Gregory I to the Lombardic Queen Theodolinda around 600 CE and subsequently donated to the basilica of St. John the Baptist which she founded in Monza.<sup>50</sup> Here the highest quality stone was reserved for the centers of the crossarms, in this case, for two large sapphires, set off by halos of garnet cloisonné. Nonetheless Gregory himself, inadvertently revealing himself to be a connoisseur of stones, wrote: “For who, when the appearance of the things themselves are considered, does not know that, in the nature of gems, garnet is preferable to sapphire? Nevertheless, sapphire of sky-blue color is preferable to pale garnet, because its beautiful appearance adds to that which the natural order takes away; whereas in that which the natural order had preferred (the pale garnet) the quality of the

48 On the significance of the size (and by extension weight) of garnets vis-à-vis species, see Adams, “Garnet Millennium” (p. 151 n. 19 above), 17–18.

49 *Codex Iuris Civilis Justinianus* 11.12.1, also available in translation, F. H. Blume, *Annotated Justinian Code*, 1st ed., <http://hdl.handle.net/10176/wyu:12399> (accessed 21 July 2015).

50 Huber, Porcher, and Volbach, *Dark Ages* (p. 147 n. 3 above), 227–28, no. 241.



FIG. 26 Detail of Sant' Apollinare in Classe, apse mosaic, Ravenna, Italy (photograph by Noël Adams)

color is debased.”<sup>51</sup> These examples suggest that both patrons and their goldsmiths understood the qualities and varieties of the gemstones they employed.

A further consideration is the placement of the stone in the center of the cross. This is, after all, the focal point, the meditative heart of the work of art. On the cross of Justin II, noted at the beginning of this essay, the center is cut away with a cross-shaped opening designed to reveal a fragment of the True Cross. The placement of an additional cross at the center of the crossarms, either in the form of a container for a relic of the True Cross or as a symbol of the same, is one of two primary conventions

established by the first half of the sixth century.<sup>52</sup> The other positioned Christ Himself at the center, either as a frontal bust as on the jeweled cross depicted on the apse mosaic at Sant'Apollinare in Classe in Ravenna (ca. 549) (fig. 26),<sup>53</sup> or as a complete crucified figure with his breast placed at the intersection of the arms.<sup>54</sup>

Many years ago Lipinsky suggested that garnets were forgotten symbols of Christ.<sup>55</sup> Recently it has been suggested that the five garnets on the Staffordshire Hoard gold cross represent the five wounds of Christ.<sup>56</sup> If we allow the possibility that the garnet in the center of the Narses Cross may have been a symbol for Christ himself, then this stone, glowing and suffused with blood-red color in the light but also filled with dark, thorn-like inclusions may have been chosen specifically as an emblem of his suffering on the cross and victory over death. At the same time, other qualities—as a symbol of truth, the spark of divine life, light in the darkness, burning faith—may also have been in the minds of the more sophisticated viewers.

Finally, we might consider the operational powers of these stones, not just in terms of personal salvation, but of the will of God, in the light of the inscription from Numbers on the silver gilt crossarm from the Staffordshire Hoard. This may be compared with the inscription from Psalms 43:6 on the silver cross from the Great Lavra monastery: “In thee will we push down our enemies, and in thy name will we bring to nought them that rise up against us.”<sup>57</sup> In the Hebraic tradition the breastplate described in Exodus and discussed above was sometimes called *hoshen mishpat* (the breastplate of

51 *Liber regula pastoralis ad Joannem episcopum civitatis Ravennae* 3.28, *Admonitio* 29 (PL 77:107B): *Quis enim consideratis ipsis rerum imaginibus, nesciat quod in natura gemmarum, carbunculus praefertur hyacintho? Sed tamen caerulei coloris hyacinthus praefertur pallenti carbunculo, quia et illi quod naturae ordo subtrahit, species decoris adjungit; et hunc quem naturalis ordo praetulerat, coloris qualitas foedat.* The passage actually concerns how to assess and judge sins of the flesh.

52 Mango, *Art of the Byzantine Empire* (p. 147 n. 1 above), 107.

53 F. W. Deichmann, *Ravenna: Hauptstadt des spätantiken Abendlandes* (Wiesbaden, 1969), 1:261 and 339; 2:245, pl. 2. Before this became a standard image for the center of crosses, a group of early Syriac metal crosses confirm that it was customary to place holy figures—the Lamb of God, the Virgin, the Virgin and Child, the Annunciation, the Adoration of the Magi—in this position (see Cotsonis, *Processional Crosses* [p. 144 n. 116 above], fig. 22a, 88–101, cat. nos. 8–10).

54 Early Byzantine examples on pectoral crosses: Pitarakis, *Les croix-reliquaires* (n. 131 above), 54–55, figs. 3–9, 14, 25–27, 34–40, 44–54.

55 A. Lipinsky, “Ein vergessenes Christus-Symbol: Der Karfunkelstein oder Almandine,” in *Atti del 9. Congresso Internazionale di Archeologia Christiana* (Rome, 1978) 346–47.

56 L. Webster, *Anglo-Saxon Art, A New History* (Ithaca and London, 2012), 125.

57 Cotsonis, *Processional Crosses*, 14.



judgment) as it indicated by the emission of light from the stones whether to engage in battle. Josephus (37–100 CE) wrote (*Antiquitates Judaicae* 3.216–18): “for through the twelve stones that the high priest wore upon his breast stitched into the *essen*, God previously communicated victory to those about to go to war. For such a radiance flashed forth from them, though the army had not yet been roused, that it was recognizable to all the multitude that God was at hand to aid them, whence the Greeks who honor our customs, because they are in no way able to contradict them, call the *essen* an oracle.”<sup>58</sup>

## Conclusions

The Narses Cross presents fresh evidence for the decoration of liturgical crosses with garnet gemstones, a tradition well known from small personal crosses. Coincidentally this has been complemented by the recent discovery of two gemmed crosses in Anglo-Saxon England. The fact that the Narses Cross inscription can be approximately dated and related to other silver crosses in Syrian church hoards provides an indirect terminus post quem for the Staffordshire Hoard gold crosses.

The presence of large garnet cabochons on the Narses and Staffordshire Hoard crosses, made some two thousand miles apart, emphasizes the uniformity of Christian ecclesiastical culture across a wide geographical area. Evidence for the control exercised by the Byzantine state over precious metals is well known,<sup>59</sup> and I have suggested elsewhere that the acquisition and redistribution of some of the best gems in the fifth and

sixth centuries was in the hands of first the imperial court and second, workshops providing arms for the civil/military administration.<sup>60</sup> This fresh evidence suggests that, as the functions of State and Church became increasingly intertwined, the latter also assumed a role at the higher end of the gem trade. From the late fifth and early sixth century onward, the evidence suggests that the best quality gemstones and materials were increasingly earmarked for the greater glory of God. Similarly, the attitudes toward easily obtainable garnet stones were conditioned by the writings of the Church Fathers whose tropes were repeated as truth in the exegeses written by educated clergy across the Christian world.

This short essay has explored several possible connotations of garnets mounted at the center of crosses: as jewels which glowed from within like a lamp, as symbols of the True Cross and by extension, Christ himself, and in some instances, perhaps as talismans of divine protection when carried into battle. It is likely that garnet gemstones were seen as imbued with powers that reflected the truth of God in accordance with Christian thinking. This, of course, does not exclude their appreciation as valuable and beautiful mineral specimens. Seen in the contexts presented here, the Narses Cross and other new finds restore some ancient perceptions of the fiery *carbunculus*.

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58 Flavius Josephus: *Translation and Commentary*, ed. S. Mason (Leiden, 2000). The text continues to say that the “essen . . . ceased to shine 200 years before I composed this work, since God was displeased at the violation of the laws.”

59 E. C. Dodd, *Byzantine Silver Treasures*, Monographien der Abegg-Stiftung 9 (Bern, 1973).

60 N. Adams, “The Development of Early Garnet Inlaid Ornaments,” in *Kontakte zwischen Iran, Byzanz und der Steppe in 6.–7. Jh.*, ed. C. Bálint, *Varia Archaeologica Hungarica* 10 (Budapest, 2000), 13–70, esp. 38–41.

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